

AMENDMENTS TO THE CLAIMS

1. (currently amended) A lithium based battery comprising a battery container containing therein:

a cell structure group formed by stacking unit cells each including a positive electrode, a negative electrode, and a separator interposed therebetween, or formed by repeatedly folding or winding an integral body of said unit cells; and

an electrolyte, which is poured in said battery container after said cell structure group is contained in said battery container,

wherein said battery is characterized by the presence on the outer peripheral surface of said battery container of a separate covering that consists essentially of an ion impermeable and extensible high polymer sheet having a tensile elongation percentage of 1 % or more, and

wherein the tensile elongation of the battery container covering is selected to cause the sheet to provide insulation between the positive and negative electrodes of the battery when the container is deformed.

2. (previously presented) A lithium based battery according to claim 1, wherein the outer periphery of said cell structure group is covered with a sheet consisting essentially of an ion impermeable and extensible high polymer sheet having a tensile elongation percentage of 1 % or more, the tensile elongation of the cell structure group cover sheet being selected to cause the sheet to provide insulation between positive and negative electrodes of the battery when the container is deformed.

3. (currently amended) A lithium based battery comprising a battery container containing therein:

a cell structure group formed by stacking unit cells each including a positive electrode, a negative electrode, and a separator interposed therebetween, or formed by repeatedly folding or winding an integral body of said unit cells; and

an electrolyte, which is poured in said battery container after said cell structure group is contained in said battery container,

wherein said battery is characterized by the presence on the outer peripheral surface of said battery container of a separate covering that consists essentially of an ion impermeable and extensible high polymer sheet having a tensile elongation percentage of 1 % or more,

wherein the tensile elongation of the battery container covering is selected to cause the sheet to provide insulation between the positive and negative electrodes of the battery when the container is deformed, and

wherein also the outer periphery of said cell structure group is covered with a sheet consisting essentially of an ion impermeable and extensible high polymer sheet having a tensile elongation percentage of 1 % or more.

4. (previously presented) A lithium based battery according to claim 3, wherein said positive electrode and said negative electrode of each of said unit cells are respectively formed on one surface of a positive collector and one surface of a negative collector in such a manner as to face to each other with said separator put therebetween; and

an ion impermeable and extensible high polymer sheet having a tensile elongation percentage of 1 % or more is disposed between adjacent two of said unit cells and/or on the outer peripheral surface of each of said unit cells, the tensile elongation of said high polymer sheet being selected to cause the sheet to provide insulation between positive and negative electrodes of the battery when the container is deformed.

5. (previously presented) A lithium based battery according to claim 2, wherein said positive electrode and said negative electrode of each of said unit cells are respectively formed on one surface of a positive collector and one surface of a negative collector in such a manner as to face to each other with said separator put therebetween; and

an ion impermeable and extensible high polymer sheet having a tensile elongation percentage of 1 % or more is disposed between adjacent two of said unit cells and/or on the outer peripheral surface of each of said unit cells, the tensile elongation of said high polymer sheet

being selected to cause the sheet to provide insulation between positive and negative electrodes of the battery when the container is deformed.

6. (previously presented) A lithium based battery according to claim 1, wherein said extensible high polymer sheet is made from at least one kind selected from a group consisting of a polyurethane based elastomer and a fluorine based elastomer.

7. (previously presented) A lithium based battery according to claim 3, wherein each of said high polymer sheets said extensible high polymer sheet is made from at least one kind selected from a group consisting of a polyurethane based elastomer and a fluorine based elastomer.

8. (previously presented) A lithium based battery according to any one of claims 1 to 7, wherein said extensible high polymer sheet has a tensile elongation percentage of 200% or more throughout the temperature range -20 to $+80$ °C.